



October 27, 1999

Ms. Magalie Roman Salas, Secretary  
Federal Communications Commission  
The Portals, TW-A325  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: Ex Parte Notification – WT Docket No. 99-168

Dear Ms. Salas:

This letter is being filed on behalf of Motorola, Inc. (Motorola). On October 26, 1999, Richard Barth, Jeanine Poltronieri, and Leigh Chinitz of Motorola met with Ari Fitzgerald, Legal Advisor to Chairman William E. Kennard and discussed the *Notice of Proposed Rule Making* in the above-referenced proceeding.

At this meeting Motorola discussed a proposed band plan for the 746-806 MHz spectrum that has been submitted in numerous ex parte filings in this proceeding. This plan would allocate a portion of the commercial-use spectrum, licensed by auction, for use by the Private Mobile Radio Service (PMRS). The purpose of this allocation, in addition to satisfying a demonstrated need by PMRS for additional spectrum, would be to manage interference at the interfaces between the Public Safety and the remaining commercial-use spectrum.

During the meeting, Motorola expressed its view that, because of the propagation characteristics of the spectrum at issue and its proximity to other mobile services, the 36 MHz under consideration in the 746-806 MHz band is ideal for meeting the demonstrated needs of mobile users. Accordingly, it should be licensed in a way that facilitates mobile use but does not prohibit fixed uses that are technically compatible.

Finally, Motorola stated its opinion that the portion of the commercial use band that in its plan is not allocated for PMRS is ideally suited for 3G services. In order to facilitate those uses, Motorola believes that spectrum in the non-PMRS portion of the band should not be subject to the existing CMRS spectrum cap, nor should there be any other limitations to an operator acquiring the non-PMRS spectrum in this band.

Attached to this letter are the slides used at these meetings. Please contact Leigh Chinitz at (202) 371-6940 regarding any questions concerning this matter.

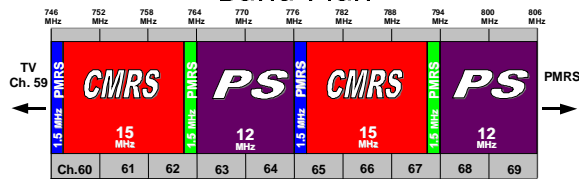
Respectfully Submitted,

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Leigh M. Chinitz  
Motorola, Inc.

Attachment  
cc:  
Ari Fitzgerald

## Band Plan



- 6 MHz allocated for private auctioned (PMRS), in two blocks of 1.5 + 1.5 MHz with band managers
- 30 MHz for Commercial Carriers (CMRS); 15+15 MHz.
- 24 MHz for public safety (allocation completed)

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## Motorola Band Plan

- Plan taking into consideration requirements of cellular/PCS, PMRS and Public safety
- Cellular/PCS have demonstrated need for additional spectrum to accommodate new services.
- PMRS have demonstrated need for additional spectrum to satisfy requirements not served by CMRS

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## Private Mobile Spectrum

- 6 MHz dedicated to PMRS
- Auctioned to Band Managers for distribution to PMRS eligible users
- One nationwide license
  - 762.5-764.0 paired with 792.5-794.0 MHz
- One regional license
  - 52 Major Economic Areas
  - 746.0-747.5 paired with 776.0-777.5 MHz
- Bidders can bid for both nationwide and regional licenses

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## Band Manager

- Obtains spectrum through auction
- Redistributes and manages use of spectrum for eligible PMRS users
- Cannot offer communications service, but can charge fee for access to spectrum
- Manages spectrum to maximize efficiency and minimize interference

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## Need to Protect Public Safety

- Experience at 800 MHz has shown that mix of adjacent frequency high height and low height systems creates interference problems "near", in close proximity, to an interfering site and "far" from desired site(s)
  - Mixed "high level" and "low level" systems

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## Spectrum Compatibility

- Cellular Type Systems can cause Interference with Conventional usage
  - Classic Near-Far Problem
    - Interference Zone around Multi-transmitter Sites
    - Strong Interference Signal and Medium to Weak Desired Signal
  - Frequent Changes to Frequency Plan to increase Capacity
  - Average Power kept high to provide portable in-building coverage

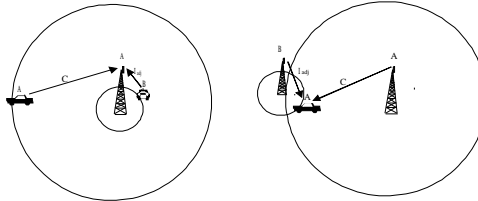
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## High Power Broadcast Use

- Similar problems to those discussed
- High HAAT/high ERP causes severe interference to lower height/lower ERP services
- Mobile services cause interference in fringe broadcast coverage areas

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## 8 Near - Far Scenarios



Unit transmitting close (**near**) to a Site on nearby undesired channel interferes with a weak (**far**) mobile talking inbound on the desired channel.

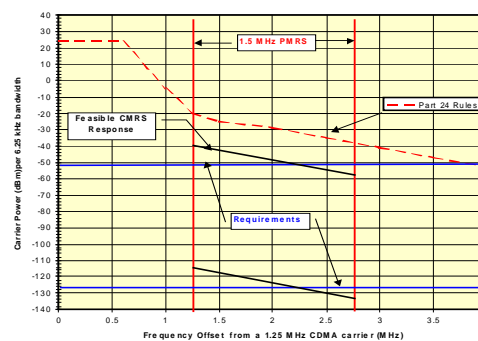
Unit **far** from desired site is interfered with when close (**near**) to nearby undesired channel base.

## Public Safety Spectrum Protection

- Interference from CMRS spectrum modeled as a 1.25 MHz CDMA carrier
- This is the widest of the existing technologies deployed in the cellular and PCS bands
- All other technologies, such as IS-136, GSM, EDGE, are narrower and will also meet proposed protection rules

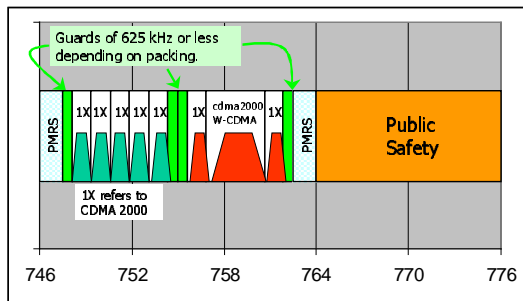
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Current & Proposed Masks for 1.25 MHz CDMA



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## Example of two 7.5 MHz licenses



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